NASA-TM-108734

WE DELIVER

(NASA-TM-108734) WE DELIVER: NASA 25TH ANNIVERSARY 1958-1983 (NASA) 12 p

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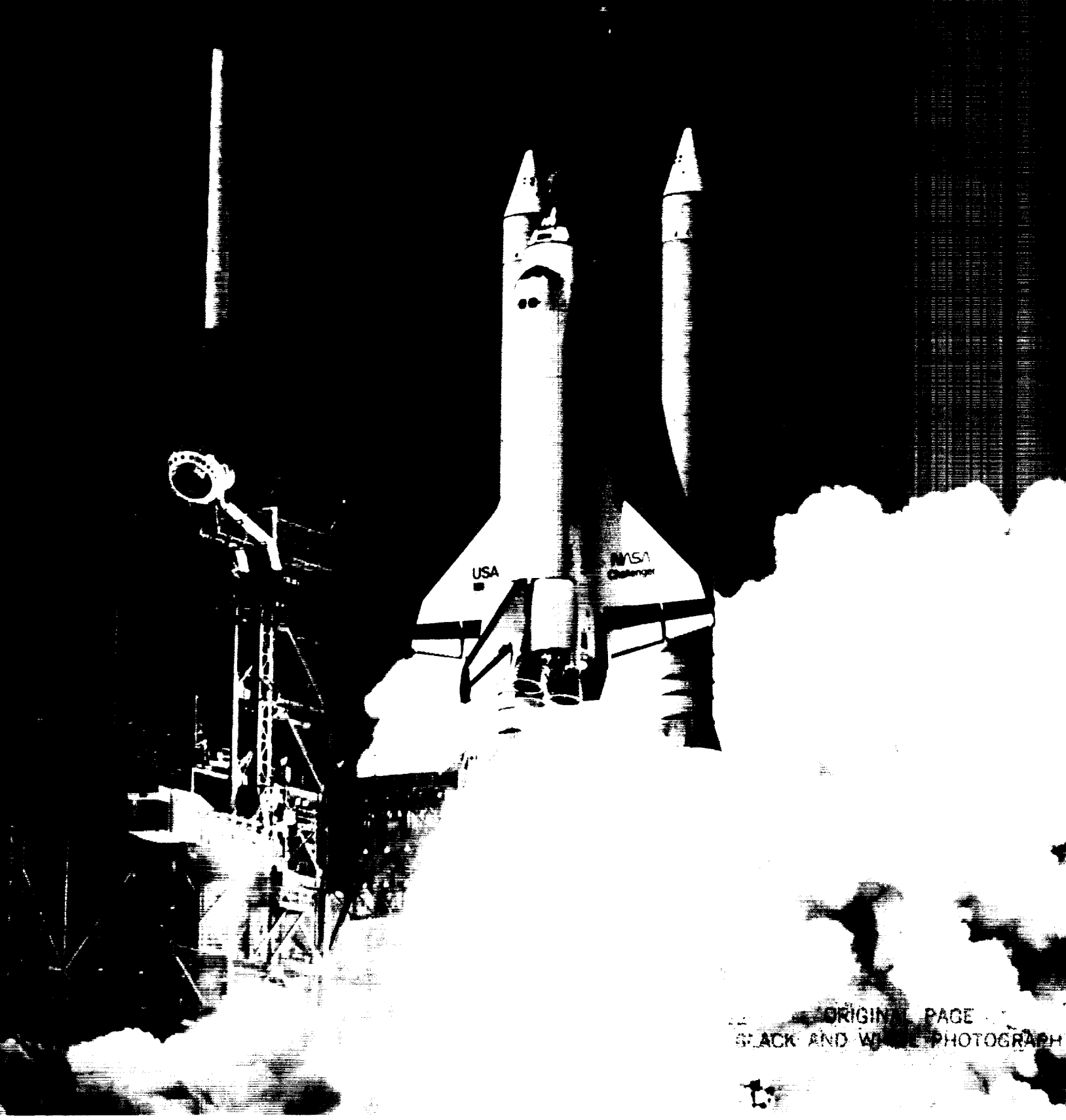
Twenty-five years of hands-on experience

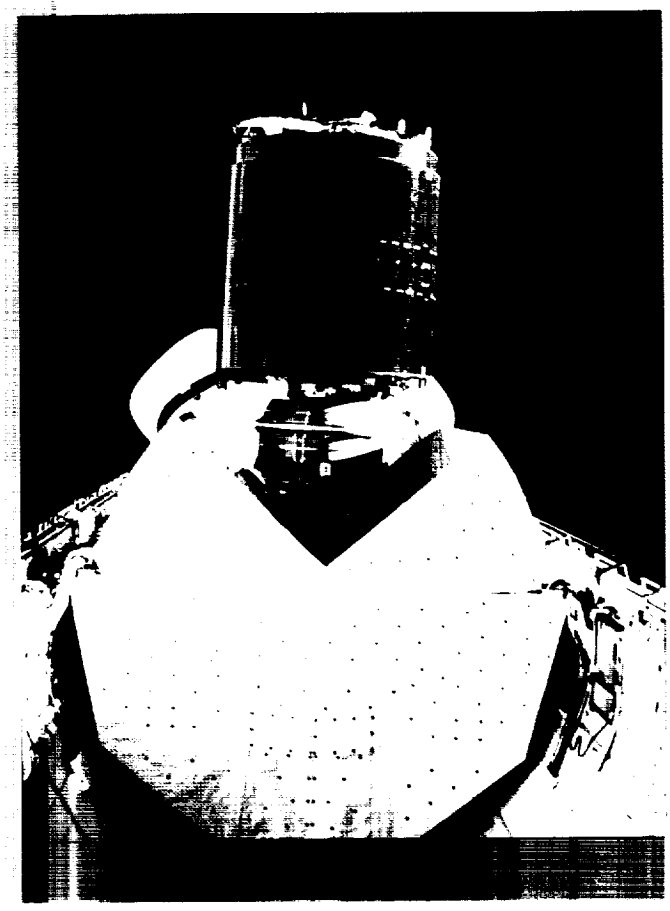


NASA

[redacted]

While many new and profitable business opportunities are becoming possible through the Space Shuttle, the primary focus during the 1980's will be on the delivery and operation of telecommunications satellites. Shuttle is ready to launch these satellite payloads; now the goal of the National Aeronautics and Space Administration is to simplify its use. We know this can be done because, with each increasingly smooth flight, there is evidence that we are substantially reducing paperwork and the time a payload must be at the launch site before liftoff. What this will mean to you is lower launch costs and less integration complexity—without compromising reliability or safety.

Supported by dedicated, "can-do" contractors, NASA has been launching telecommunications satellites for almost 25 years. In providing launch services for over 100 payloads destined for geostationary orbits, NASA has assembled a team of launch operation experts whose talent, experience, and launch record are unmatched. This team and Shuttle's extraordinary capabilities enable NASA to offer you a cost-effective launch system unequaled by any other existing or planned system on Earth.

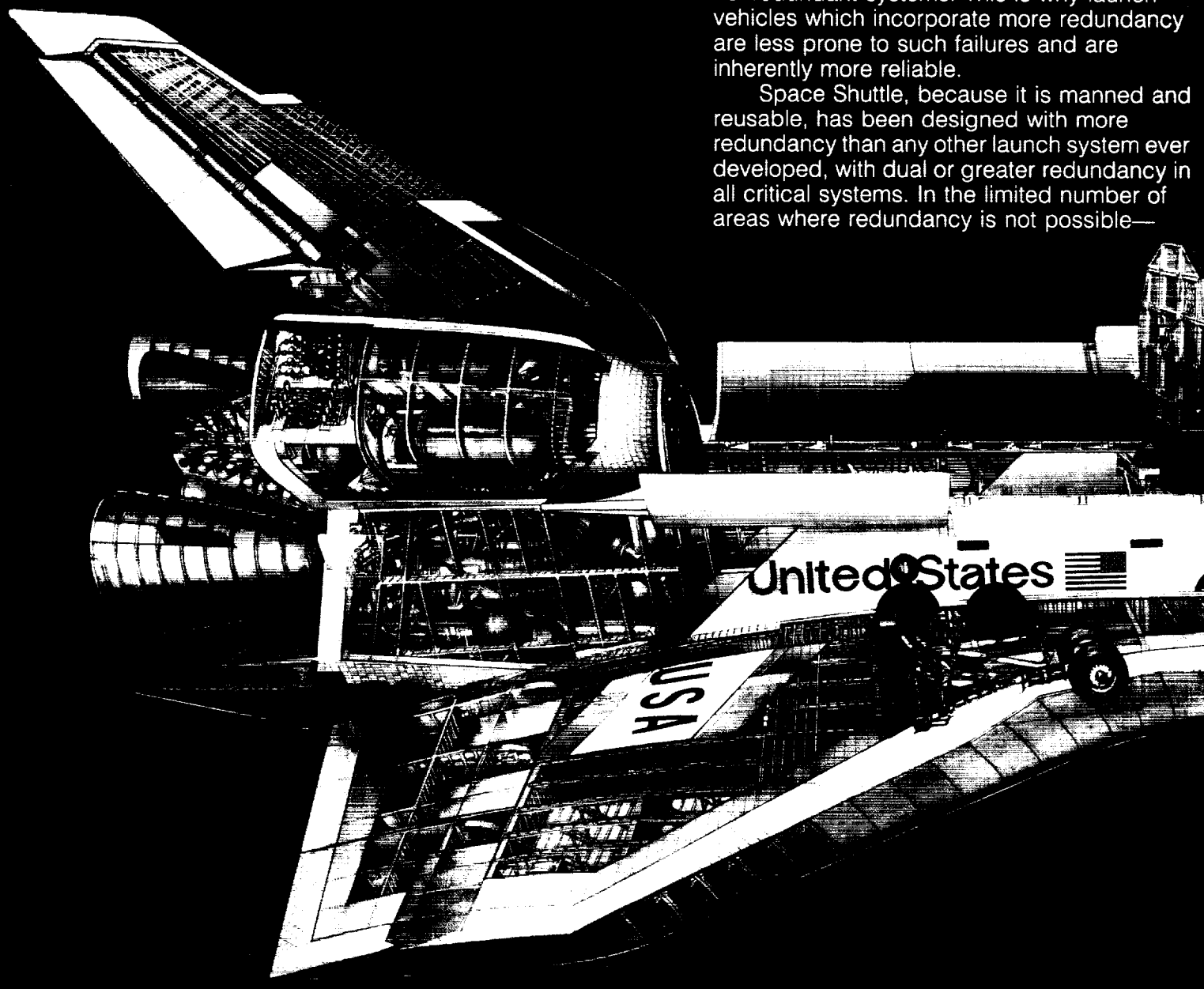


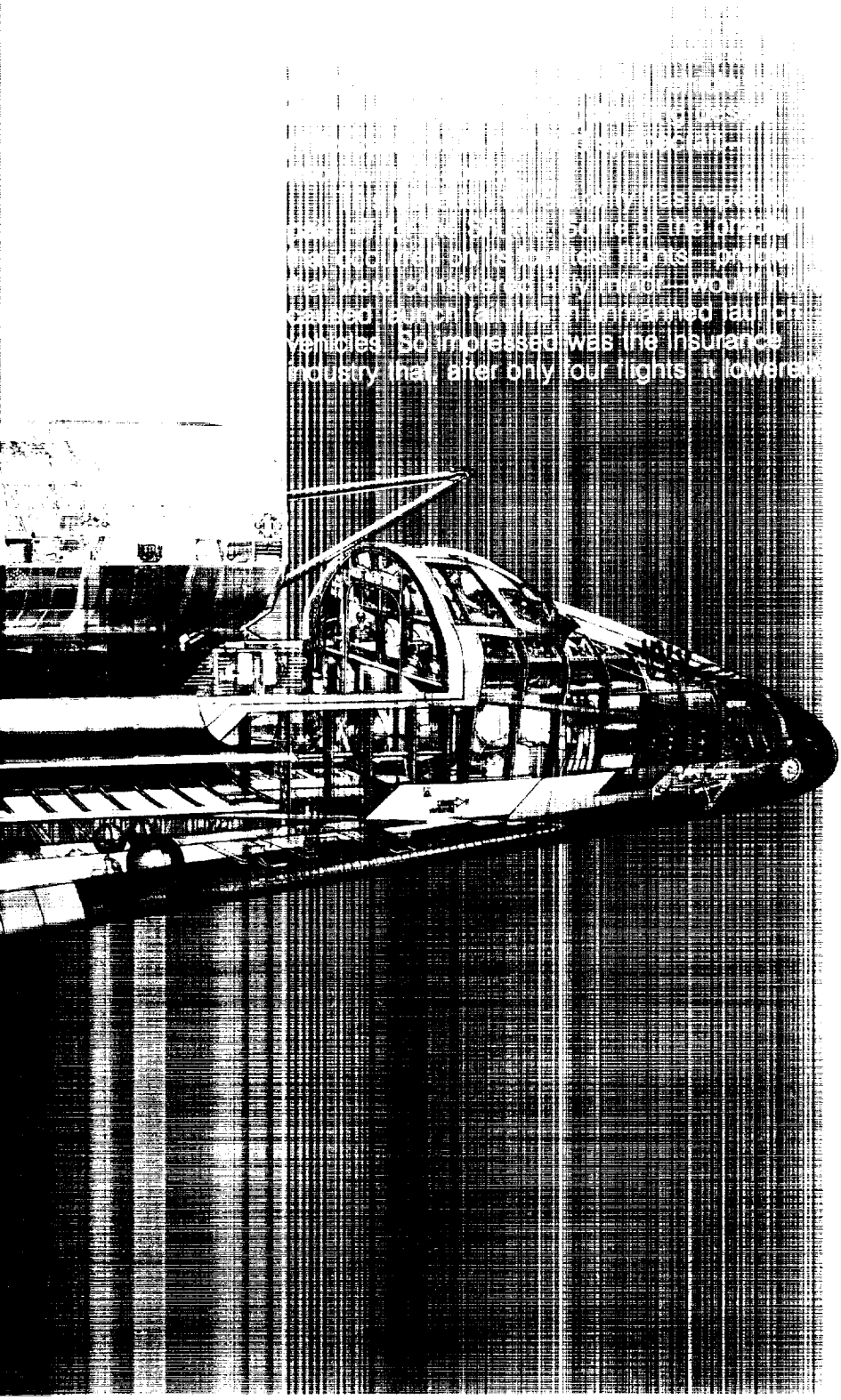
NASA

You can't beat manned reliability

In launch operations, redundancy is synonymous with reliability. We know from our experience that new or significantly modified launch vehicles normally have relatively high failure rates during early launches, mostly in nonredundant systems. This is why launch vehicles which incorporate more redundancy are less prone to such failures and are inherently more reliable.

Space Shuttle, because it is manned and reusable, has been designed with more redundancy than any other launch system ever developed, with dual or greater redundancy in all critical systems. In the limited number of areas where redundancy is not possible—



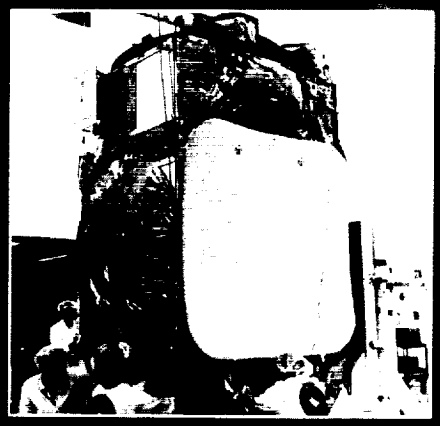


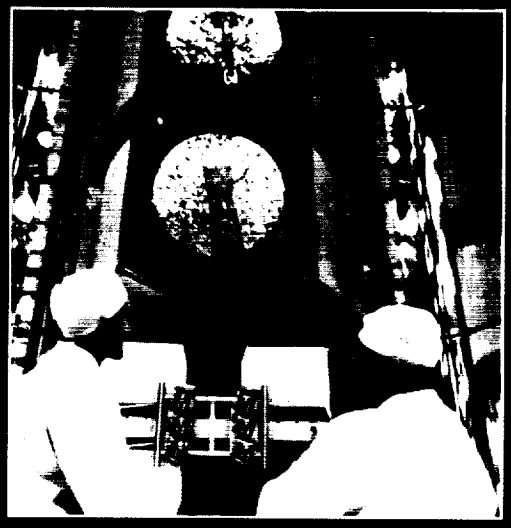
vehicles. So impressed was the insurance industry that, after only four flights, it lowered

offers you an unmatched set of benefits from its expendable counterparts. These reliability advantages derive from the unique capabilities of the Shuttle Orbiters and the flight crew. For example, a problem should arise during launch or after orbit insertion necessitating a mission abort (a risk estimated to be less than three percent), the Orbiter would return to Earth for a controlled landing. Your payload—instead of being lost, as would occur with an expendable launch vehicle—would be safe and ready for relaunch after only minimal further checkout. The number of payloads (designed to the same specifications as telecommunications satellite payloads) that have been planned for and successfully flown on roundtrips aboard the Shuttle have demonstrated the benign return trip environment of the Shuttle.

Moreover, Shuttle alone gives you an opportunity, once in orbit, to check out your payload and to make an unhurried decision on whether or not to proceed with deployment. Should there be significant doubt about the condition of your payload, it can be returned to Earth with the Orbiter, for relaunch on another day.

Finally, the Space Shuttle offers flexibility and expanded capabilities that provide the opportunity to significantly improve satellite designs by taking advantage of the new features that only the Shuttle provides. Such an integral design approach will offer you, the customer, the maximum benefits of the world's most versatile, operational space transportation system.

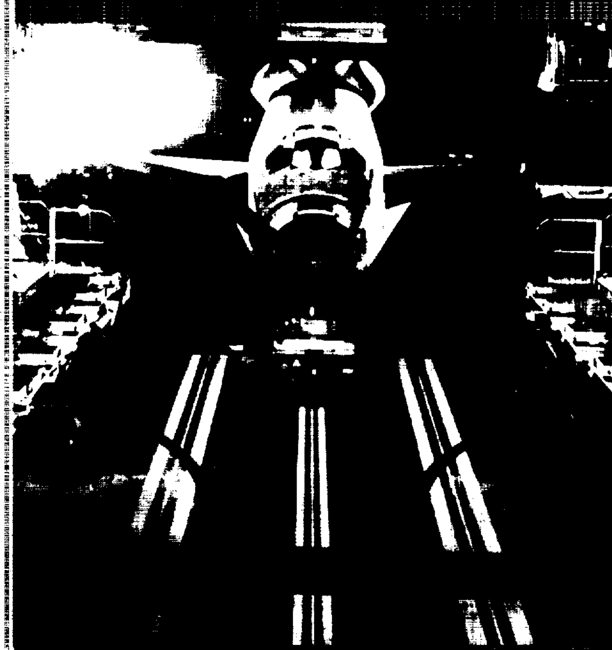




[illegible] ...y and ... [illegible] ...ly contradictory ... [illegible] ...space ventures ... [illegible] ...NASA will commit to the launch schedule for your payload with no caveats linking that commitment to other payloads assigned to share your flight. In other words, NASA will launch your payload, even if your launch partner fails to show up for launch. This principle was most vividly demonstrated on the STS-8 launch, when NASA kept its commitment to launch the Indian National Satellite INSAT payload as schedule, even after its companion payload was removed from the flight.

From the standpoint of payload availability, NASA is committed to provide replacement and reflight launch services within six to nine months of notification. This commitment assures you of the ability to maintain an operational satellite system, once it has been established. Launch scheduling flexibility can be further improved by planning an entire series of payload launches on the Shuttle, thereby providing built-in flexibility through multiple launch scheduling. This is of particular importance for the first launch of a new payload design where on-time delivery of the first payload may be a concern. By scheduling the first several launches within three to six months of each other, late delivery of the first payload would be accomodated no later than the launch date planned for the second payload.

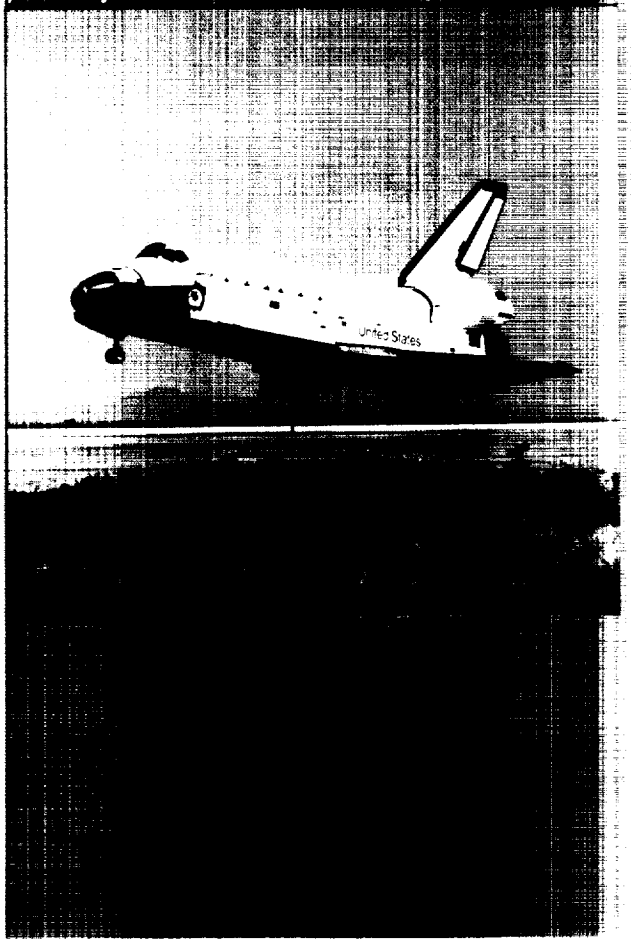
NASA recognizes the concern of some that discovery of a generic problem in the Shuttle design could suddenly cripple the Shuttle flight schedule, but history suggests that such a concern is unfounded. The Space Shuttle has flown a string of spectacularly [illegible] ...Shuttle fleet, such a possibility exists for any launch vehicle. A review of our manned missions shows that such problems result in flight delays of only a few months. But if a problem were to become a grave threat to Shuttle operations, the involvement of the Department of Defense in the Shuttle program ensures that a lengthy delay would not be tolerated. Any problem that could ground the Shuttle fleet would attract the resources as well as the urgent attention of the United States government. We have no doubt that the problem would be quickly solved.



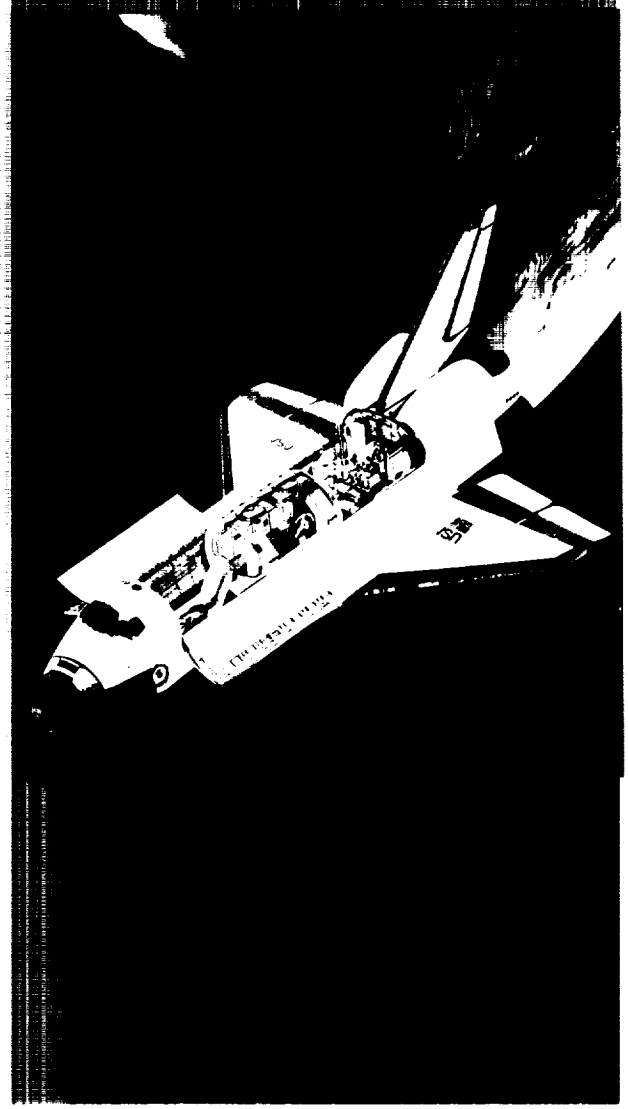
NASA
Challenger

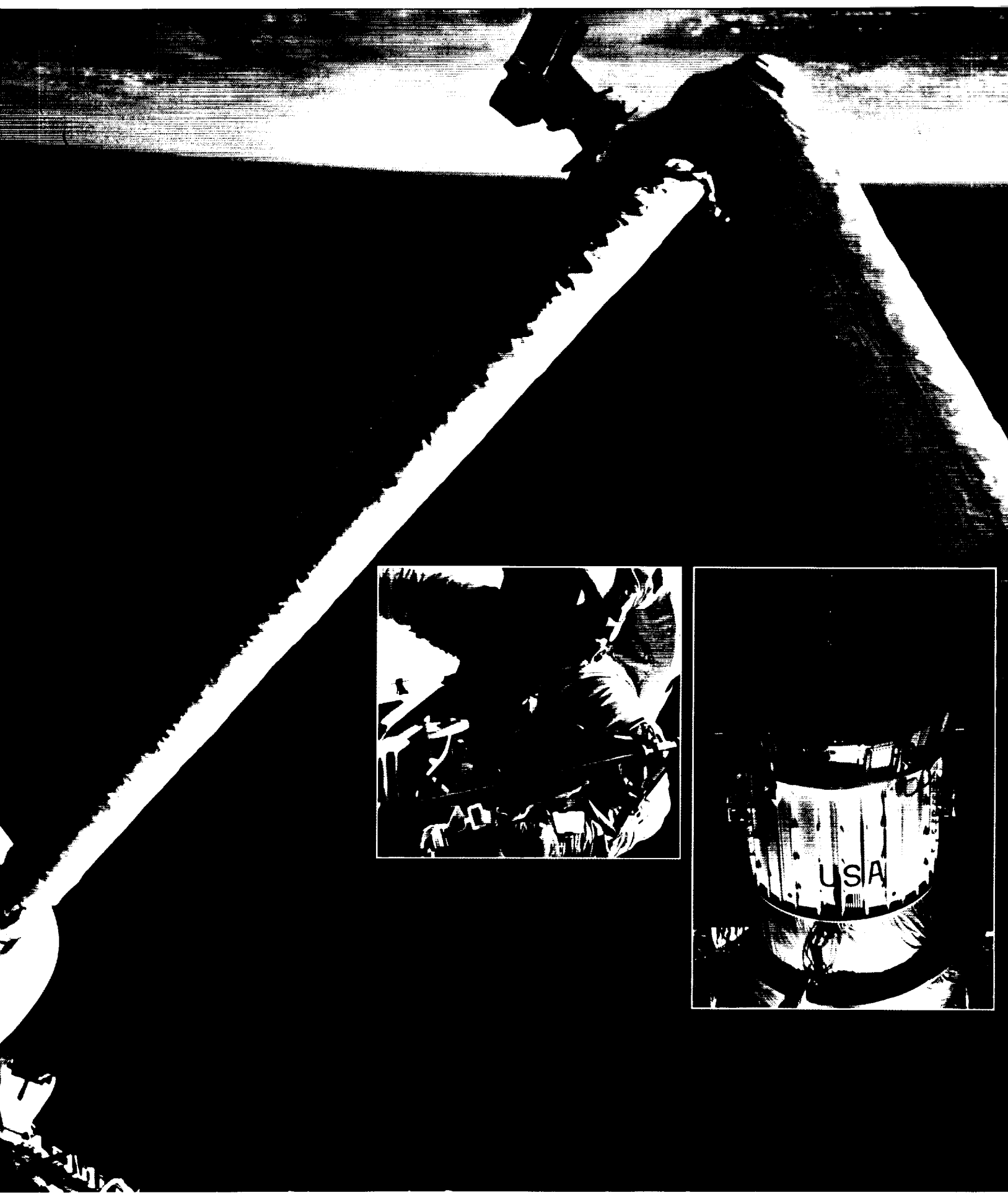
NASA

For the launching of your payload, we offer an unparalleled combination—the world's most reliable space transporter and a launch team that is internationally recognized for its experience and successes. Praised by every crew that has flown it, the Space Shuttle is launched by people who never compromise their first objective—to launch safely and successfully. This was dramatically demonstrated on the first flight of the Challenger (STS-6). Although engine problems caused a launch delay of several weeks, we painfully took the time necessary to



have flown more than 30 Shuttle missions, nearly half involving deployment of payloads. We are confident that the Space Shuttle fleet and its launch team can give you the surest, safest, and most cost-effective launch service obtainable anywhere in the world.

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